

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A computer-implemented method for defining a color gradient to be applied to a region, the method comprising:

receiving user input defining a gradient starting point for a color gradient to be applied to fill a region of an image, the color gradient defining a transition between colors in the region;

receiving user input defining a gradient ending point;

receiving user input defining at least one intermediary point between the gradient starting point and the gradient ending point; and

receiving user input defining a first and a second set of values for a set of gradient attributes, the first set of values defining a smooth transition of colors between the gradient starting point and the at least one intermediary point, and the second set of values defining a smooth transition of colors between the at least one intermediary point and the gradient ending point, wherein the first and the second set of values are distinct.

2. (Original) The method of claim 1, further comprising:

rendering the color gradient in accordance with the gradient starting point, the gradient ending point, the at least one intermediary point, and the first and second set of values for the set of gradient attributes.

3. (Previously presented) The method of claim 2, further comprising:

applying the rendered color gradient to a region including scaling the gradient to fit the region.

4. (Original) The method of claim 3, wherein the region corresponds to an object.
5. (Previously presented) The method of claim 2, further comprising:  
applying one or more copies of the rendered color gradient to a region until the region is covered.
6. (Original) The method of claim 5 wherein the region corresponds to an object.
7. (Previously presented) The method of claim 5, wherein each copy has an identical size and shape to the rendered color gradient.
8. (Cancelled)
9. (Original) The method of claim 1, wherein the first and second set of values are defined by a user input.
10. (Previously presented) The method of claim 1, further comprising:  
defining two intermediary points; and  
defining a third set of values for the set of gradient attributes, the third set of values defining a transition between the two intermediary points, wherein the first, second, and third set of values contain distinct values.
11. (Original) The method of claim 10, further comprising:  
rendering the color gradient in accordance with the defined gradient starting point, the gradient ending point, the two intermediary points and the first, second and third set of attributes.
12. (Previously presented) The method of claim 1, wherein the color gradient is a linear color gradient and the set of gradient attributes includes an angle attribute having a value defining a distinct angle of the color gradient relative to a tangent of a bounding box edge for the region to which the color gradient is to be applied.

13. (Previously presented) The method of claim 1, wherein the color gradient is a radial color gradient and the set of gradient attributes includes an offset attribute having a value defining a distinct offset of the color gradient relative to a center of a bounding box for the region to which the color gradient is to be applied.

14. (Previously presented) The method of claim 13, wherein defining a distinct value of the offset includes:

defining a value of an offset in a horizontal direction relative to the center of the bounding box.

15. (Previously presented) The method of claim 13, wherein defining a distinct value of the offset includes:

defining a value of an offset in a vertical direction relative to the center of the bounding box.

16. (Previously presented) The method of claim 1, wherein the set of gradient attributes includes a color attribute having a value defining a distinct color for each of the at least one intermediary point, the starting point and the ending point.

17. (Previously presented) The method of claim 1, wherein the set of gradient attributes includes a rate of change attribute having a value defining a distinct rate of change of a color in the color gradient between a color associated with one of the starting point, the ending point, and the at least one intermediary point and a color associated with an adjacent point.

18. (Previously presented) The method of claim 17, wherein a color is represented by a set of color components and defining a distinct value of a rate of change includes:

defining a value of a rate of change for one or more color components in the color gradient between a color component set associated with one of the starting point, the ending point, and the at least one intermediary point and a color component set associated with an adjacent point.

19. (Previously presented) The method of claim 16, wherein the set of gradient attributes includes a constant color attribute having a value defining a distinct constant color attribute defining a portion of the color gradient for which a color component remains constant.
20. (Previously presented) The method of claim 16, wherein the set of gradient attributes includes a color traversal attribute having a value defining a distinct set of colors to be traversed between two defined points in the color gradient.
21. (Previously presented) The method of claim 20, wherein defining a distinct set of colors comprises:  
defining a set of colors including colors in a color wheel.
22. (Previously presented) The method of claim 1, wherein the set of gradient attributes includes a color function attribute having a value defining a distinct mathematical function describing a color variation between two points in the color gradient.
23. (Previously presented) The method of claim 22, wherein the distinct mathematical function is a non-linear mathematical function.
24. (Previously presented) The method of claim 22, wherein the distinct mathematical function is a mathematical function describing the variation of one or more color components between the two points in the color gradient.
25. (Previously presented) The method of claim 22, wherein the distinct mathematical function is a user-specified mathematical function.
26. (Previously presented) The method of claim 1, wherein the set of gradient attributes includes a color contour function attribute having a value defining a distinct mathematical function describing a color contour between two points in the color gradient.
27. (Previously presented) The method of claim 26, wherein the distinct mathematical function is a non-linear mathematical function.

28. (Previously presented) The method of claim 26, wherein the distinct mathematical function is a user-specified mathematical function.

29. (Original) The method of claim 1, further comprising:

defining a mathematical function describing a variation of a gradient attribute between two points in the color gradient, the gradient attribute being selected from the group consisting of an angle, an offset in a horizontal direction, an offset in a vertical direction, a rate of change for a color, and a portion of the color gradient having constant color.

30. (Previously presented) A computer program product for defining a color gradient to be applied to a region, the computer program product comprising instructions operable to cause a computer to:

receive user input defining a gradient starting point for a color gradient to be applied to fill a region of an image, the color gradient defining a transition between colors in the region;

receive user input defining a gradient ending point;

receive user input defining at least one intermediary point between the gradient starting point and the gradient ending point; and

receive user input defining a first and a second set of values for a set of gradient attributes, the first set of values defining a smooth transition of colors between the gradient starting point and the at least one intermediary point, and the second set of values defining a smooth transition of colors between the at least one intermediary point and the gradient ending point, wherein the first and second set of values contain distinct values.

31. (Previously presented) The computer program product of claim 30, further comprising instructions operable to cause a computer to:

render the color gradient in accordance with the gradient starting point, the gradient ending point, the at least one intermediary point, and the first and the second set of values for the set of gradient attributes.

32. (Previously presented) The computer program product of claim 31, further comprising instructions operable to cause a computer to:

apply the rendered color gradient to a region including scaling the gradient to fit the region.

33. (Original) The computer program product of claim 32, wherein the region corresponds to an object.

34. (Previously presented) The computer program product of claim 31, further comprising instructions operable to cause a computer to:

apply one or more copies of the rendered color gradient to a region until the region is covered.

35. (Original) The computer program product of claim 34 wherein the region corresponds to an object.

36. (Previously presented) The computer program product of claim 34, wherein each copy has an identical size and shape to the rendered color gradient.

37. (Cancelled)

38. (Original) The computer program product of claim 30, wherein the first and second set of values are defined by a user input.

39. (Previously presented) The computer program product of claim 30, further comprising instructions operable to cause a computer to:

define two intermediary points; and

define a third set of values for the set of gradient attributes, the third set of values defining a transition between the two intermediary points, wherein the first, the second, and the third set of values contain distinct values.

40. (Previously presented) The computer program product of claim 39, further comprising instructions operable to cause a computer to:

render the color gradient in accordance with the defined gradient starting point, the gradient ending point, the two intermediary points and the first, the second and the third set of values.

41. (Previously presented) The computer program product of claim 30, wherein the color gradient is a linear color gradient and the set of gradient attributes includes an angle attribute having a value defining a distinct angle of the color gradient relative to a tangent of a bounding box edge for the region to which the color gradient is to be applied.

42. (Previously presented) The computer program product of claim 30, wherein the color gradient is a radial color gradient and the set of gradient attributes includes an offset attribute having a value defining a distinct offset of the color gradient relative to a center of a bounding box for the region to which the color gradient is to be applied.

43. (Previously presented) The computer program product of claim 42, wherein the value defining a distinct offset defines a value of an offset in a horizontal direction relative to the center of the bounding box.

44. (Previously presented) The computer program product of claim 42, wherein the value defining a distinct offset defines a value of an offset in a vertical direction relative to the center of the bounding box.

45. (Previously presented) The computer program product of claim 30, wherein the set of gradient attributes includes a color attribute having a value defining a distinct color for each of the at least one intermediary point, the starting point and the ending point.

46. (Previously presented) The computer program product of claim 30, wherein the set of gradient attributes includes a rate of change attribute having a distinct value defining a rate of change of a color in the color gradient between a color associated with one of the starting point, the ending point, and the at least one intermediary point and a color associated with an adjacent point.
47. (Previously presented) The computer program product of claim 46, wherein a color is represented by a set of color components and the distinct value defining a rate of change defines a rate of change for one or more color components in the color gradient between a color component set associated with one of the starting point, the ending point, and the at least one intermediary point and a color component set associated with an adjacent point.
48. (Previously presented) The computer program product of claim 45, wherein the set of gradient attributes includes a constant color attribute having a value defining a distinct constant color attribute defining a portion of the color gradient for which a color component remains constant.
49. (Previously presented) The computer program product of claim 45, wherein the set of gradient attributes includes a color traversal attribute having a value defining a distinct set of colors to be traversed between two defined points in the color gradient.
50. (Currently amended) The computer program product of claim 49, wherein the distinct set of colors ~~colors-colors~~ selected from a color wheel.
51. (Previously presented) The computer program product of claim 30, wherein the set of gradient attributes includes a color function attribute having a value defining a distinct mathematical function describing a color variation between two points in the color gradient.
52. (Previously presented) The computer program product of claim 51, wherein the distinct mathematical function is a non-linear mathematical function.



53. (Previously presented) The computer program product of claim 51, wherein the distinct mathematical function describes the variation of one or more color components between the two points in the color gradient.

54. (Previously presented) The computer program product of claim 51, wherein the distinct mathematical function is a user-specified mathematical function.

55. (Previously presented) The computer program product of claim 30, wherein the set of gradient attributes includes a color contour function attribute having a value defining a distinct mathematical function describing a color contour between two points in the color gradient.

56. (Previously presented) The computer program product of claim 55, wherein the distinct mathematical function is a non-linear mathematical function.

57. (Previously presented) The computer program product of claim 55, wherein the distinct mathematical function is a user-specified mathematical function.

58. (Original) The computer program product of claim 30, further comprising instructions operable to cause a computer to:

define a mathematical function describing a variation of a gradient attribute between two points in the color gradient, the gradient attribute being selected from the group consisting of an angle, an offset in a horizontal direction, an offset in a vertical direction, a rate of change for a color, and a portion of the color gradient having constant color.

59. (Previously presented) A computer-implemented method for rendering a color gradient to be applied to fill a region, the method comprising:

receiving user input defining a gradient starting point for a color gradient to be applied to fill a region of an image, the color gradient defining a transition between colors of the image and the gradient starting point being associated with a starting color;

receiving user input defining a gradient ending point, the gradient ending point being associated with an ending color;

receiving user input defining at least one intermediary point between the gradient starting point and the gradient ending point, the at least one intermediary point being associated with an intermediate color, the starting color, the ending color, and the intermediary color being distinct colors;

associating a set of gradient attribute values with the at least one intermediary point and one of the gradient starting point and the gradient ending point, each set of values defining a smooth color transition between the associated point and an adjacent point, wherein each set of values are distinct; and

rendering the color gradient in accordance with the gradient starting color, the gradient ending color, the at least one intermediate color and the respective sets of values associated with the gradient starting point, the gradient ending point and the least one intermediary point.